

Amendments to the Claims

1. *(Currently Amended)* A signaling method comprising: producing an OFDM symbol (~~609~~); transforming the OFDM symbol to produce an OFDM signal (~~611~~); and processing (~~615, 617~~) the OFDM signal to produce a radio frequency signal that occupies multiple sub-bands within a transmission band from about 3200MHz to about 10300MHz, each sub-band having a bandwidth of about 500MHz.

2. *(Original)* The method of claim 1, wherein processing the OFDM signal comprises: upsampling the OFDM signal to produce an upsampled OFDM signal; applying a pseudo-random code to the upsampled OFDM signal to produce a coded OFDM signal; and upconverting the coded OFDM signal to produce a radio frequency signal.

3. *(Original)* The method of claim 1, wherein the radio frequency signal occupies multiple ones of the following sub-bands: a first sub-band from about 3200MHz to about 3700MHz; a second sub-band from about 4000MHz to about 4200MHz; and a third sub-band from about 4200MHz to about 4800MHz.

4. *(Original)* The method of claim 1, wherein processing the OFDM signal comprises: upconverting the OFDM signal to produce a radio frequency signal; wherein the radio frequency signal occupies multiple ones of the following sub-bands: a first sub-band from about 3200MHz to about 3700MHz; a second sub-band from about 4000MHz to about 4200MHz; and a third sub-band from about 4200MHz to about 4800MHz.

5. *(Original)* The method of claim 1, comprising: producing a sequence of N consecutive identical OFDM symbols; and transforming the OFDM symbols to produce corresponding OFDM signals; wherein processing the OFDM signal comprises upconverting the coded OFDM signal to produce a radio frequency signal that occupies N sub-bands of the transmission band.

6. *(Currently Amended)* A radio communication system comprising: means for processing a communications signal that occupies multiple sub-bands within a transmission bandwidth of about 1500MHz, each sub-band having a bandwidth of about 500MHz; and means for processing an OFDM symbol, including at least one of: inverse transform means (344) for transforming an OFDM symbol to produce an OFDM signal, said means for processing a signal processing the OFDM signal to produce a radio frequency signal; and forward transform means (440) for transforming an OFDM signal to produce an OFDM symbol, said means for processing a signal processing a baseband signal to produce the OFDM signal.

7. *(Original)* The apparatus of claim 6, wherein the radio frequency signal occupies multiple ones of the following sub-bands: a first sub-band from about 3200MHz to about 3700MHz; a second sub-band from about 4000MHz to about 4200MHz; and a third sub-band from about 4200MHz to about 4800MHz.

8. *(Original)* The apparatus of claim 6, comprising: forward transform means for transforming an OFDM signal to produce an OFDM symbol, said means for processing a signal processing a baseband signal to produce the OFDM signal; and means for selecting a subset of the multiple sub-band and for receiving the radio frequency signal within the subset of sub-bands to produce the baseband signal.

9. *(Original)* The apparatus of claim 6, comprising: forward transform means for transforming an OFDM signal to produce an OFDM symbol, said means for processing a signal processing a baseband signal to produce the OFDM signal; and means for receiving the radio frequency signal within multiple sub-bands and non-coherently combining signals from the multiple sub-bands to produce the baseband signal.

10. *(Original)* The apparatus of claim 6, comprising: forward transform means for transforming an OFDM signal to produce an OFDM symbol, said means for processing a signal processing a baseband signal to produce the OFDM signal; and means for sampling the radio frequency signal within multiple sub-bands to produce the baseband signal, at a comparatively high sampling rate compared to a sampling

rate for sampling the radio frequency signal within a single sub-band; wherein the OFDM signal transformed by the forward transform means is a column vector of complex values, the column vector being of a comparatively large size compared to a size for representing a single sub-band.

11. *(Original)* The apparatus of claim 10, comprising: means for decomposing the column vector into multiple smaller column vectors and for applying the multiple smaller column vectors sequentially in time to the forward transform means.

12. *(Original)* The apparatus of claim 11, wherein the number of smaller column vectors is equal to the number of multiple sub-bands.

13. *(Original)* The apparatus of claim 6, comprising: means for repeating OFDM symbols such that, at least during one mode of operation, each OFDM symbol occurs as part of a sequence of N identical OFDM symbols.

14. *(Original)* The apparatus of claim 13, wherein N is equal to the number of multiple sub-bands.